

PROJECT NAME: Ultra Lightweight, High Strength Sucker Rods for Deep Well Pumping

RECIPIENT: Rock West Composites

LOCATION: West Jordan, UT

PURPOSE: To develop and qualify ultra lightweight, high strength, sucker rods to lower the cost and improve the efficiency of deep oil and gas well pumping.

Megalex lightweight sucker rods for pumping oil and gas wells show great promise for producing deeper wells and for recovering more resources from existing wells that are now “shut-in”. These new fiber-reinforced plastic rods are 75% lighter than existing steel rods and have greater strength and corrosion resistance. To grow sustainable domestic energy resources, operators must drill deeper to reach oil and gas reserves. However, less than 1 percent of all wells drilled in the United States have penetrated below 15,000 feet. The Megalex lightweight rods will allow lower cost sucker rod pumping systems for lifting liquids from gas and oil wells from depths as great as 25,000 feet. Additional funding is required for end fitting design and fatigue testing.

Justification:

Currently, the U.S. has untapped oil and gas reserves at depths that are economically and technically infeasible to pump. The oil and gas industry recognizes sucker rod pumping as the most cost effective method for reducing well bottom-hole pressure, which allows for maximum well oil and gas production at all depths. Megalex lightweight, high strength sucker rods enable pumping to deeper depths than was technically possible in the past. Thin rod design allows for deep pumping in existing slim-hole well bores now shut-in as uneconomic. The need to drill new wells on state and federal lands is reduced by affordably reactivating and extending the lives of existing wells. Slim-hole design of the sucker rods also reduces drilling costs for new (deep) wells by enabling the use of smaller diameter tubing and casing.

Lower drilling and production costs benefit the citizens of Utah through higher oil/gas revenues, more jobs, lower fuel costs, and contribute to overall US energy independence from foreign suppliers.

Funding Details:

\$500,000 for end fitting design, sucker rod material fabrication, and testing to quantify fatigue strengths

\$500,000 to build prototype rod strings and deployment in test wells.

AMOUNT: \$1M